

Scientific Drilling

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HOBBSOCD

30-025-28549

EOG

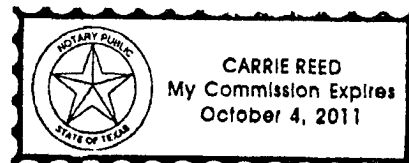
Field: Undesignated Morrow
Site: Eddy County, NM
Well: Longway Draw Federal Com #1
Wellpath: VH - Job #32K0909393
Survey: 09/28/09

This survey is correct to the best of my knowledge
and is supported by actual field data.

.....*Richard A. Smith*.....Company Representative

Notorized this date 21st of October, 2009.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: EOG	Date: 09/30/2009	Time: 20:43:43	Page: 1
Field: Undesignated Morrow	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Longway Draw Federal Com #1	Section (VS) Reference:	Well (0.00N,0.00E,120.26Azi)	
Wellpath: VH - Job #32K0909393	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: 09/28/09	Start Date: 09/28/2009
KSRG 0'-1467'	
Company: Scientific Drilling Internatio	Engineer: Madrid w/BWWC
Tool: Keeper,Keeper Surface Readout Gyro	Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.38	7.37	100.00	-0.13	0.33	0.04	0.38	0.33	7.37
200.00	0.60	348.74	200.00	-0.60	1.17	-0.02	0.27	1.17	359.16
300.00	0.77	308.17	299.99	-1.62	2.10	-0.65	0.50	2.20	342.86
400.00	0.99	266.79	399.98	-3.00	2.47	-2.04	0.65	3.20	320.43
500.00	1.12	257.94	499.96	-4.45	2.21	-3.86	0.21	4.45	299.86
600.00	1.19	247.05	599.94	-5.79	1.61	-5.77	0.23	5.99	285.55
700.00	1.01	240.98	699.92	-6.86	0.77	-7.50	0.21	7.54	275.89
800.00	1.22	244.38	799.90	-7.91	-0.12	-9.23	0.22	9.23	269.29
900.00	1.12	230.76	899.88	-8.85	-1.19	-10.94	0.29	11.01	263.77
1000.00	1.07	235.78	999.86	-9.60	-2.34	-12.47	0.11	12.69	259.39
1100.00	1.09	227.12	1099.85	-10.27	-3.51	-13.94	0.16	14.38	255.87
1200.00	1.03	229.97	1199.83	-10.85	-4.73	-15.33	0.08	16.04	252.83
1300.00	0.85	227.47	1299.82	-11.38	-5.81	-16.56	0.18	17.55	250.66
1400.00	0.54	215.60	1399.81	-11.64	-6.70	-17.38	0.34	18.63	248.92
1500.00	0.42	221.80	1499.81	-11.76	-7.36	-17.90	0.13	19.35	247.66
1600.00	0.36	215.85	1599.80	-11.86	-7.88	-18.33	0.07	19.95	246.73
1700.00	0.43	221.36	1699.80	-11.96	-8.42	-18.76	0.08	20.56	245.83
1800.00	0.42	227.93	1799.80	-12.15	-8.95	-19.28	0.05	21.26	245.11
1900.00	0.38	225.44	1899.80	-12.34	-9.42	-19.79	0.04	21.92	244.53
2000.00	0.13	212.92	1999.79	-12.44	-9.75	-20.09	0.25	22.33	244.10
2100.00	0.11	103.17	2099.79	-12.35	-9.87	-20.06	0.20	22.35	243.80
2200.00	0.26	132.64	2199.79	-12.04	-10.05	-19.80	0.17	22.20	243.09
2300.00	0.15	189.20	2299.79	-11.77	-10.33	-19.65	0.22	22.20	242.27
2400.00	0.21	105.22	2399.79	-11.54	-10.51	-19.49	0.24	22.14	241.68
2500.00	0.31	99.61	2499.79	-11.11	-10.60	-19.05	0.10	21.80	240.91
2600.00	0.60	97.62	2599.79	-10.38	-10.71	-18.26	0.29	21.17	239.60
2700.00	0.90	86.86	2699.78	-9.24	-10.74	-16.96	0.33	20.08	237.66
2800.00	1.14	81.25	2799.76	-7.81	-10.55	-15.19	0.26	18.49	235.24
2900.00	1.22	89.00	2899.74	-6.13	-10.38	-13.15	0.18	16.75	231.72
3000.00	1.57	85.48	2999.71	-4.09	-10.25	-10.72	0.36	14.83	226.28
3100.00	1.76	87.52	3099.67	-1.67	-10.07	-7.82	0.20	12.75	217.80
3200.00	2.27	81.77	3199.61	1.17	-9.72	-4.32	0.55	10.64	203.96
3300.00	2.42	83.50	3299.53	4.41	-9.20	-0.26	0.17	9.21	181.64
3400.00	2.09	82.63	3399.45	7.54	-8.73	3.64	0.33	9.46	157.35
3500.00	1.78	82.81	3499.39	10.22	-8.30	6.99	0.31	10.85	139.89
3600.00	1.41	82.65	3599.35	12.43	-7.95	9.75	0.37	12.58	129.18
3700.00	1.16	86.37	3699.33	14.24	-7.73	11.98	0.26	14.26	122.82
3800.00	1.04	94.24	3799.31	15.90	-7.73	13.90	0.19	15.90	119.08
3900.00	0.81	122.45	3899.30	17.42	-8.18	15.40	0.50	17.44	117.97
4000.00	0.83	126.41	3999.29	18.85	-8.99	16.58	0.06	18.86	118.46
4100.00	0.68	140.46	4099.28	20.13	-9.87	17.54	0.24	20.13	119.38
4200.00	0.94	182.26	4199.27	21.07	-11.15	17.89	0.63	21.08	121.94
4300.00	1.01	191.82	4299.25	21.73	-12.83	17.67	0.18	21.84	125.99
4400.00	1.02	195.86	4399.24	22.23	-14.55	17.25	0.07	22.57	130.15
4500.00	1.05	169.33	4499.22	23.05	-16.31	17.17	0.48	23.68	133.52
4600.00	1.38	137.01	4599.20	24.81	-18.09	18.17	0.75	25.64	134.88
4700.00	1.57	139.55	4699.17	27.25	-20.01	19.88	0.20	28.21	135.20
4800.00	1.76	133.06	4799.12	30.04	-22.10	21.89	0.27	31.11	135.28



Scientific Drilling International Survey Report

Company: EOG
Field: Undesignated Morrow
Site: Eddy County, NM
Well: Longway Draw Federal Com #1
Wellpath: VH - Job #32K0909393

Date: 09/30/2009 Time: 20:43:43 Page: 2
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,120.26Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ChD ft	ChA deg
4900.00	2.11	133.65	4899.07	33.33	-24.42	24.34	0.35	34.48	135.10
5000.00	2.39	126.20	4998.99	37.20	-26.93	27.36	0.40	38.38	134.55
5100.00	2.10	127.91	5098.91	41.09	-29.28	30.48	0.30	42.27	133.85
5200.00	1.42	127.67	5198.87	44.13	-31.17	32.91	0.68	45.32	133.44
5300.00	1.07	121.20	5298.84	46.29	-32.41	34.69	0.38	47.47	133.05
5400.00	1.07	127.03	5398.82	48.15	-33.45	36.23	0.11	49.31	132.72
5500.00	1.13	132.09	5498.81	50.05	-34.68	37.71	0.11	51.23	132.60
5600.00	0.94	133.34	5598.79	51.81	-35.90	39.04	0.19	53.04	132.60
5700.00	0.78	138.17	5698.78	53.26	-36.97	40.09	0.18	54.53	132.68
5800.00	0.60	138.25	5798.77	54.40	-37.87	40.89	0.18	55.73	132.80
5900.00	0.53	137.48	5898.77	55.34	-38.60	41.55	0.07	56.71	132.89
6000.00	0.57	153.64	5998.76	56.20	-39.39	42.09	0.16	57.64	133.10
6100.00	0.57	138.70	6098.76	57.09	-40.21	42.64	0.15	58.60	133.32
6200.00	0.60	137.35	6198.75	58.06	-40.96	43.32	0.03	59.62	133.40
6300.00	0.64	151.35	6298.75	59.04	-41.84	43.94	0.16	60.67	133.60
6400.00	0.60	152.16	6398.74	59.96	-42.79	44.45	0.04	61.70	133.91
6500.00	0.46	142.38	6498.74	60.78	-43.57	44.94	0.17	62.60	134.11
6600.00	0.60	160.77	6598.73	61.55	-44.39	45.36	0.22	63.46	134.38
6700.00	0.51	150.31	6698.73	62.33	-45.27	45.75	0.14	64.36	134.69
6800.00	0.57	150.38	6798.72	63.14	-46.09	46.22	0.06	65.27	134.92
6900.00	0.44	164.59	6898.72	63.85	-46.89	46.57	0.18	66.08	135.20
7000.00	0.50	154.33	6998.72	64.49	-47.65	46.86	0.10	66.83	135.48
7100.00	0.43	172.27	7098.71	65.08	-48.42	47.10	0.16	67.55	135.79
7200.00	0.59	187.11	7198.71	65.51	-49.30	47.08	0.21	68.17	136.32
7300.00	0.55	178.81	7298.70	65.96	-50.29	47.03	0.09	68.85	136.92
7400.00	0.75	184.32	7398.70	66.50	-51.42	46.99	0.21	69.66	137.58
7500.00	0.79	191.14	7498.69	67.01	-52.75	46.81	0.10	70.53	138.42
7600.00	1.02	192.66	7598.68	67.51	-54.30	46.48	0.23	71.47	139.43
7700.00	1.05	182.60	7698.66	68.20	-56.08	46.24	0.18	72.69	140.49
7800.00	0.97	184.10	7798.64	69.00	-57.84	46.14	0.08	73.99	141.42
7900.00	1.34	189.01	7898.62	69.80	-59.84	45.90	0.38	75.41	142.51
8000.00	1.43	193.37	7998.59	70.58	-62.21	45.43	0.14	77.03	143.86
8100.00	1.52	187.70	8098.56	71.45	-64.74	44.96	0.17	78.82	145.22
8200.00	1.28	181.51	8198.53	72.50	-67.17	44.75	0.28	80.71	146.32
8300.00	1.22	182.68	8298.51	73.53	-69.35	44.67	0.07	82.49	147.21
8400.00	1.11	177.56	8398.49	74.55	-71.38	44.67	0.15	84.20	147.96
8500.00	1.19	180.72	8498.47	75.58	-73.38	44.69	0.10	85.92	148.66
8600.00	1.08	173.07	8598.45	76.66	-75.36	44.79	0.19	87.67	149.27
8700.00	1.10	174.00	8698.43	77.80	-77.25	45.01	0.03	89.40	149.77
8800.00	0.90	173.57	8798.41	78.84	-78.98	45.20	0.20	91.00	150.22
8900.00	0.84	188.01	8898.40	79.58	-80.49	45.18	0.23	92.30	150.69
9000.00	0.72	192.46	8998.39	80.05	-81.83	44.94	0.13	93.36	151.22
9100.00	0.77	181.18	9098.38	80.57	-83.11	44.80	0.15	94.42	151.68
9200.00	0.61	190.81	9198.38	81.08	-84.31	44.68	0.20	95.42	152.08
9300.00	0.33	174.15	9298.37	81.42	-85.12	44.61	0.31	96.10	152.34
9400.00	0.29	122.09	9398.37	81.85	-85.54	44.86	0.27	96.59	152.33
9500.00	0.35	140.53	9498.37	82.38	-85.91	45.26	0.12	97.10	152.22
9600.00	1.00	199.94	9598.36	82.83	-86.97	45.16	0.88	97.99	152.56
9700.00	1.28	164.86	9698.35	83.78	-88.86	45.15	0.74	99.68	153.06
9800.00	1.68	170.01	9798.31	85.52	-91.39	45.70	0.42	102.18	153.43
9900.00	0.69	194.17	9898.29	86.64	-93.41	45.81	1.09	104.04	153.88
10000.00	0.78	248.59	9998.28	86.38	-94.25	45.03	0.68	104.45	154.46



Scientific Drilling International Survey Report

Company: EOG
Field: Undesignated Morrow
Site: Eddy County, NM
Well: Longway Draw Federal Com #1
Wellpath: VH - Job #32K0909393

Date: 09/30/2009 Time: 20:43:43 Page: 3
Co-ordinate(N/E) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,120.26Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

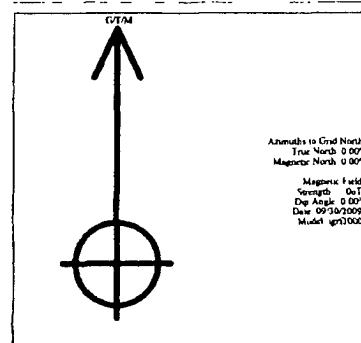
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
10100.00	1.15	247.58	10098.27	85.35	-94.88	43.46	0.37	104.36	155.39
10200.00	0.82	264.00	10198.25	84.16	-95.33	41.83	0.43	104.11	156.31
10300.00	0.21	224.72	10298.25	83.54	-95.54	40.98	0.67	103.96	156.78
10400.00	0.93	17.09	10398.25	83.31	-94.89	41.09	1.12	103.41	156.58
10500.00	1.55	16.66	10498.22	82.81	-92.82	41.72	0.62	101.77	155.80
10600.00	2.11	13.36	10598.17	81.95	-89.74	42.53	0.57	99.31	154.64
10700.00	1.79	352.85	10698.11	80.47	-86.39	42.76	0.76	96.40	153.66
10800.00	2.22	347.09	10798.05	78.20	-82.96	42.14	0.47	93.05	153.07
10900.00	1.99	359.50	10897.98	75.98	-79.33	41.69	0.51	89.62	152.28
11000.00	1.93	0.41	10997.93	74.26	-75.91	41.69	0.07	86.61	151.23
11100.00	2.56	14.36	11097.85	72.81	-72.07	42.25	0.83	83.54	149.62
11200.00	3.20	15.35	11197.72	71.48	-67.21	43.55	0.64	80.08	147.06
11300.00	2.34	3.04	11297.61	69.83	-62.48	44.39	1.04	76.64	144.61
11400.00	1.80	12.24	11397.54	68.41	-58.91	44.83	0.63	74.03	142.73
11500.00	1.47	340.96	11497.50	66.95	-56.16	44.75	0.94	71.81	141.45
11600.00	0.91	311.27	11597.48	65.20	-54.42	43.73	0.82	69.82	141.22
11700.00	1.78	287.70	11697.45	62.90	-53.43	41.66	1.01	67.75	142.06
11800.00	1.87	282.55	11797.40	59.83	-52.60	38.58	0.19	65.23	143.74
11900.00	2.40	297.85	11897.33	56.19	-51.27	35.14	0.77	62.15	145.57
12000.00	1.84	292.06	11997.26	52.50	-49.69	31.80	0.60	58.99	147.38
12100.00	1.34	255.35	12097.23	50.09	-49.38	29.18	1.11	57.36	149.42
12200.00	1.79	339.50	12197.20	48.05	-48.21	27.50	2.12	55.51	150.30
12300.00	1.30	1.48	12297.17	46.29	-45.61	26.99	0.76	53.00	149.39
12400.00	1.57	343.34	12397.13	44.75	-43.17	26.62	0.53	50.72	148.34
12500.00	1.72	342.14	12497.09	42.63	-40.43	25.77	0.15	47.94	147.49
12600.00	1.11	293.24	12597.07	40.55	-38.62	24.42	1.30	45.69	147.69
12700.00	0.50	94.13	12697.06	39.98	-38.27	23.96	1.59	45.15	147.94
12800.00	0.70	23.54	12797.06	40.30	-37.74	24.64	0.71	45.07	148.85
12900.00	0.62	246.93	12897.05	39.91	-37.39	24.39	1.23	44.64	146.88
13000.00	0.54	105.35	12997.05	40.04	-37.73	24.35	1.10	44.90	147.16
13100.00	0.12	110.45	13097.05	40.60	-37.89	24.90	0.42	45.34	146.69
13200.00	0.64	297.70	13197.05	40.14	-37.66	24.50	0.76	44.93	146.95
13300.00	0.58	5.22	13297.04	39.37	-36.90	24.05	0.68	44.05	146.90
13400.00	0.45	343.54	13397.04	38.87	-36.02	23.99	0.23	43.28	146.34
13500.00	0.40	313.73	13497.04	38.25	-35.40	23.63	0.22	42.56	146.28
13600.00	0.89	335.82	13597.03	37.27	-34.45	23.05	0.54	41.45	146.21
13700.00	1.53	9.08	13697.01	36.16	-32.43	22.95	0.93	39.72	144.71
13800.00	1.52	18.01	13796.97	35.40	-29.85	23.57	0.24	38.03	141.70
13900.00	1.16	2.71	13896.95	34.65	-27.57	24.03	0.50	36.57	138.93
14000.00	1.22	4.03	13996.92	33.71	-25.50	24.15	0.07	35.12	136.56
14100.00	1.48	12.00	14096.90	32.83	-23.18	24.49	0.32	33.72	133.42
14200.00	1.56	2.87	14196.86	31.80	-20.55	24.83	0.25	32.23	129.62
14300.00	1.53	14.09	14296.83	30.80	-17.90	25.22	0.30	30.93	125.36
14400.00	1.12	339.76	14396.80	29.68	-15.69	25.21	0.87	29.69	121.89
14467.00	1.19	338.57	14463.79	28.63	-14.42	24.73	0.11	28.63	120.26

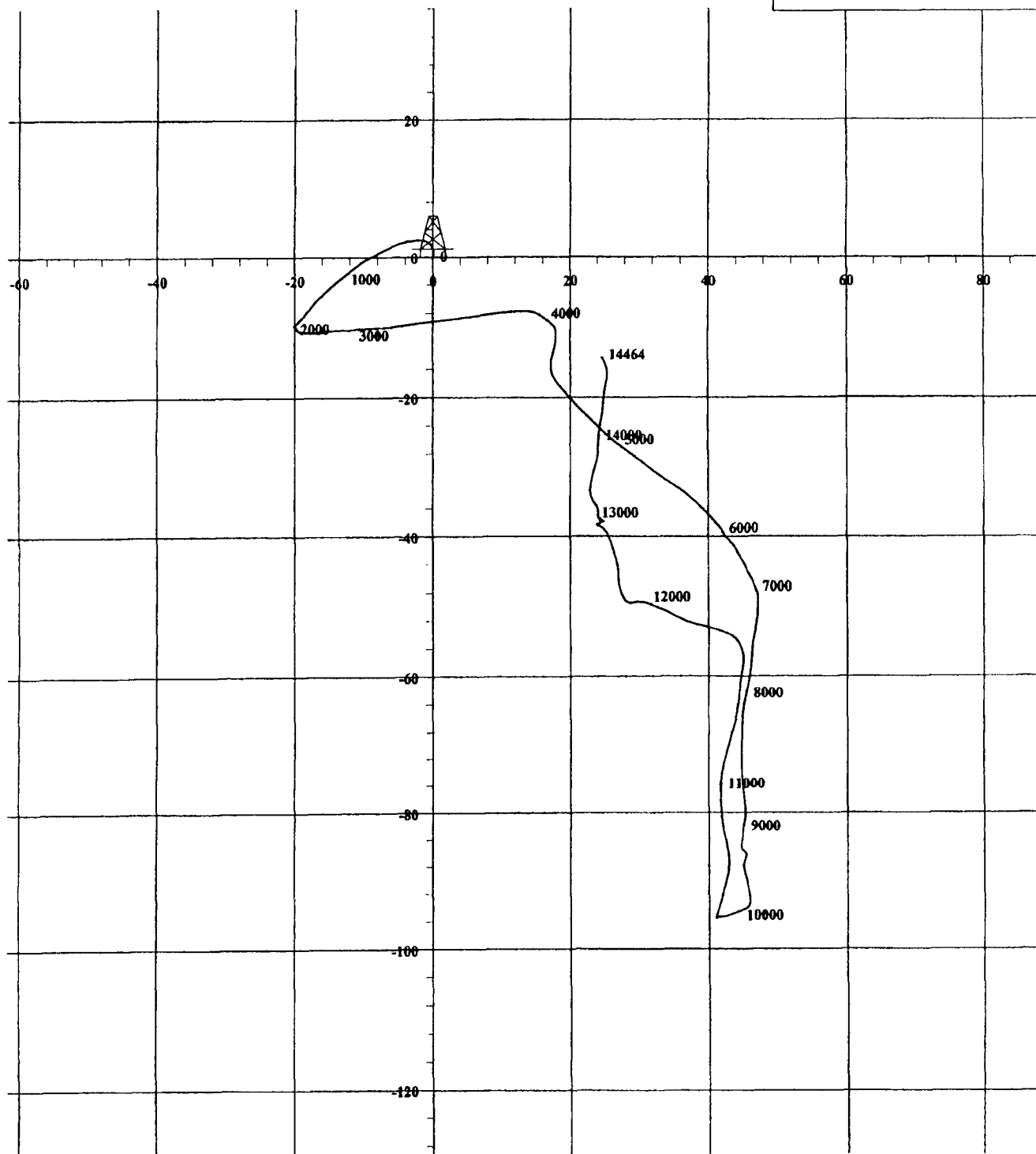


Scientific
Drilling

Field: Undesignated Morrow
Site: Eddy County, NM
Well: Longway Draw Federal Com #1
Wellpath: VH - Job #32K0909393
Survey: 09/28/09



South(-)/North(+) [20ft/in]



West(-)/East(+) [20ft/in]